

IN THE SPECIFICATION:

Please amend the specification as follows:

On page 5, please replace the following paragraph:

Control over the flow of electrons from emitter 54a that reach base 56 is provided by the relative states of ferromagnetic layers FM1 and FM2 in base 56. Control is also provided by the potentials selected for emitter-base power supply ~~50~~ 60 and collector-base power supply 78. These supplies are adjusted to provide sufficient energy for electrons to pass Schottky barrier diode 72 so they can reach quantum well 64 in collector 58. In one embodiment, the state of FM1 is flipped under the control of adjacent magnetic data 30 (FIG. 1). FM2 can have a substantially higher coercivity than FM1 so FM1 can have its magnetization flipped in the magnetic field of adjacent magnetic data 30 while the state of FM2 is not affected by this field.

On page 9, please replace the following paragraph:

Tunneling barrier 62 and the tunnel junction between emitter 54a and base 56 can be replaced with another barrier, such as second Schottky barrier 120, as shown in FIG. 2c. To fabricate, lightly doped n type semiconductor wafer 122 is direct bonded in high vacuum to top layer 98 of metal base layer 56 to form Schottky barrier ~~110~~ 120 and emitter 54c. Direct bonding in high vacuum is accomplished using a process as described in the paper, "Room Temperature-Operating Spin-Valve Transistors Formed by Vacuum Bonding," D.J. Monsma et al., Science, vol. 281, Jul. 17, 1998, pp. 407-409. A more heavily doped region is then provided for the ohmic emitter contact ~~114~~, as also described in the Monsma paper. Further details on direct bonding are provided in US Patent 4,247,034, incorporated herein by reference.